Opposing Views Attachment #1

The Following Compelling, Indisputable Science Reveals Timber Harvest Activities Will Inflict Major, Tragic Damage to the Natural Resources in and Downstream from the Sale Area. The Cutting Units and New Roads will also Harm the Recreational Opportunities and Scenery.

The experts' statements below are clear and to the point. USFS employees are taught by the agency that logging is natural resource benign and will solve most problems in the forest, real or cooked up. Of course this is untrue. A few USFS specialists understand this ... yet they choose to play the game to avoid jeopardizing their jobs.

The following "Opposing Views" present scientific information that disproves the USFS claim that logging benefits the natural resources in the forest. These "Opposing Views" are subject to 40 CFR 1502.9(b). The views are not irresponsible and they weren't adequately discussed or considered in this NEPA document.

Timber Harvest Opposing View "We concluded that commercial timber sales do not meet the criteria for forest restoration." (Pg. 11)

Long, Richard D., U.S. Department of Agriculture Office of Inspector General "Western Region Audit Report: Forest Service National Fire Plan Implementation" *Report No. 08601-26-SF*, November 2001. http://www.usda.gov/oig/webdocs/08601-26-SF.pdf

FS Response: The purpose for this project (EA at 1-4) "The purpose of the Chetco Bar Fire Salvage project is to capture timber value in the matrix land allocations by harvesting dead, dying and/or damaged trees resulting from the 2017 Chetco Bar fire."

Timber Harvest Opposing View "Biodiversity in managed ecosystems is poor. Less biodiverse communities and ecosystems are more susceptible to adverse weather (such as drought) and exotic invaders, and have greatly reduced rates of biomass production and nutrient cycling."

Naeem, Shahid Ph.D., F.S. Chapin III Ph.D., Robert Costanza Ph.D., Paul R. Ehrlich Ph.D., Frank B. Golley Ph.D., David U. Hooper Ph.D. J.H. Lawton Ph.D., Robert V. O'Neill Ph.D., Harold A. Mooney Ph.D. Osvaldo E. Sala Ph.D., Amy J. Symstad Ph.D., and David Tilman Ph.D. "Biodiversity and Ecosystem Functioning: Maintaining Natural Life Support Processes." Issues in Ecology No. 4. Fall 1999. http://cfpub.epa.gov/watertrain/pdf/issue4.pdf

FS Response: No reference to forest management, salvage sales, or anything connected to this project. No detailed response warranted.

Timber Harvest Opposing View "Late last year a court found the Forest Service in violation of the National Environmental Policy Act for failing to properly address the impacts of logging in roadless areas within the footprint of the 2014 French fire. The court sent the Forest Service back to the drawing board, but the Service has now issued yet another decision authorizing the same logging it had illegally approved. The Center will head back to court to ask that the existing prohibition against logging remains in place, especially given the presence of West Coast fishers."

"It's appalling to see the Forest Service allowing important wildlife habitat to be destroyed, especially in a roadless area," said Justin Augustine, an attorney with the Center for Biological Diversity. "Roadless areas represent some of the last, best places for wildlife like fishers to survive. The Forest Service needs to be protecting these places, not logging them."

Forest Service Approves Habitat Destruction in Sierra Nevada Roadless Area---Decision Allows Post-fire Logging in Habitat Occupied by Rare West Coast Fishers

Published by the Center for Biological Diversity, April 29, 2016

https://www.biologicaldiversity.org/news/press_releases/2016/fisher-04-29-2016.html

FS Response: Opinion piece, no detailed response required.

Timber Harvest Opposing View "In response to the changes described above, the timber industry and the Forest Service have sought to find new justifications for taxpayer-subsidized logging on public lands. In particular, they have tried to emphasize concerns over forest fire, contending that more logging should be used to prevent fire, even though logging actually often leaves forest areas more fire-prone. These calls for more logging have been tied to claims that there is too much fire in forests."

Hanson, Chad, Ph.D. "National Forest Protection" Environment Now (see picture on last page) http://www.environmentnow.org/forest.html

FS Response: Opinion piece, no detailed response required.

Timber Harvest Opposing View "Logging equipment compacts soils. Logging removes biomass critical to future soil productivity of the forest. Logging disturbs sensitive wildlife. Logging typically requires roads and skid trails which create chronic sources of sedimentation that degrades water quality and aquatic organism habitat. Logging roads and skid trails are also a major vector for the spread of weeds. Logging

disrupts nutrient cycling and flows. Logging can alter species composition and age structure (i.e. loss of old growth). Logging can alter fire regimes. Logging can change water cycling and water balance in a drainage. The litany of negative impacts is much longer, but suffice it to say that anyone who suggests that logging is a benefit or benign is not doing a full accounting of costs."

Those who suggest that logging "benefits" the forest ecosystem are using very narrow definitions of "benefit." Much as some might claim that smoking helps people to lose weight and is a "benefit" of smoking."

Wuerthner, George "Who Will Speak For the Forests?"

NewWest, January 27, 2009

http://www.newwest.net/topic/article/who_will_speak_for_the_forests/C564/L564/

FS Response: Opinion piece, no detailed response required.

Timber Harvest Opposing View "Timber harvest operations have been shown to have many effects on adjacent watercourses and on the aquatic ecosystems they support. This may occur from introductions or loss of woody debris, loss of riparian vegetation, accelerated stream bank and bed erosion, the alteration of natural channel form and process, and the reduction of stream habitat diversity. However, the existing literature indicates one of the most insidious effects of logging is the elevation of sediment loads and increased sedimentation within the drainage basin.

Anderson, P.G. 1996. "Sediment generation from forestry operations and associated effects on aquatic ecosystems" Proceedings of the Forest-Fish Conference: Land Management Practices Affecting Aquatic Ecosystems, May 1-4, 1996, Calgary, Alberta. https://www.for.gov.bc.ca/hfd/library/ffip/Anderson_PG1998.pdf

FS Response: Refer to EA at 3-72 for discussion on Soils, and 3-89 for discussion on Hydrology. Appendix A displays the project design criteria for protection of both of these resources.

Timber Harvest Opposing View "Logging simplifies forest ecosystems (Dudley et al 1995) by narrowing the age range of the stand and suppressing diversification through repeated harvesting, burning to remove slash, and replanting with hybrid seedlings. Simplification affects the health and productivity of the forest because simplified forests lack the variety found in older stands, including species diversity, vertical structure, and microhabitat. From an ecological standpoint, a simplified forest of a particular age has less overall bio-mass per acre than a natural forest of the same age, but a simplified forest produces a higher volume of merchantable timber."

Scott, Mark G.

"Forest Clearing in the Gray's River Watershed 1905-1996"

A research paper submitted in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE in GEOGRAPHY Portland State University, 2001 http://www.markscott.biz/papers/grays/chapter1.htm

FS Response: Thesis paper, not published/peer reviewed. Paper not relevant to current Forest practices.

Timber Harvest Opposing View "Timber harvest will remove dead and dying material from the site and inhibit the recruitment of downed woody material as time progresses. Timber harvest and associated reduced structural complexity and reduced age and size class diversity are all known to reduce population abundance and diversity of ants and a number of birds.

"Applying Ecological Principles to Management of the U.S. National Forests"

Issues in Ecology Number 6 Spring 2000

https://19january2017snapshot.epa.gov/watershedacademy/applying-ecological-principles-management-us-national-forests_.html

FS Response: Taken out of context. Appendix A of the EA has detailed flow charts in order to protect snags and down wood. Effects to down wood and snags are discussed in the EA on pages 3-17.

Timber Harvest Opposing View "According to a 1998 poll by a firm that has worked for several Republican House members and two presidents, 69 percent of Americans oppose commercial logging on federally owned land. The Forests Service's own poll showed that 59 percent of Americans who expressed an opinion oppose timber sales and other commodity production in national forests."

"Many Americans are surprised to learn that logging is even allowed on public lands. Alas, it has been since the Organic Act of 1897 first authorized logging in America's new forest reserves."

Barry, John Byrne. "Stop the Logging, Start the Restoration" from *The Planet* newsletter
June 1999, Volume 6, Number 5
http://vault.sierraclub.org/planet/199905/ecl1.asp

FS Response: Opinion.

Timber Harvest Opposing View "Federal auditors have found that the Forest Service frequently fails to assess, prevent or correct environmental damage from logging on the national forests.

After inspecting 12 timber projects in the field from 1995 to 1998, the Agriculture Department's inspector general found that all were deficient and that 'immediate corrective action is needed."

Cushman, John H. Jr. "Audit Faults Forest Service on Logging

Damage in U.S. Forests" New York Times, February 5, 1999

http://query.nytimes.com/gst/fullpage.html?res=9B00E2DF163BF936A35751C0A96F958260&sec=&spon=&pagewanted=print

http://www.ncpa.org/sub/dpd/index.php?Article_ID=12468

FS Response: Taken out of context. Particular to 12 specific timber sales from 1995-1998.

Timber Harvest Opposing View "Logging on national forest land creates more economic harm than good, according to a recent study by the National Forest Protection Alliance and the Forest Conservation Council.

The 75-page report, three years in the making, notes there are dramatic economic and social losses when forests are logged under the U.S. Forest Service's timber-sale program.

The report, "The Economic Case Against Logging National Forests," states that national forest lands are far more valuable to rural communities when trees are left standing, and that the federal logging program creates billions of dollars in unaccounted costs for communities, businesses, and individuals. This expense comes in addition to timber industry subsidies, which cost American taxpayers approximately \$1.2 billion a year."

Higgins, Margot, "National forest logging is bad business, study says" Posted on CNN.com-Nature, March 16, 2000 http://www.colorado.edu/AmStudies/lewis/west/costlogging.pdf

FS Response: This is an article that comments on a report that is not contained in the link. It is an opinion piece, not relevant to the

project. Effects to both recreation and aquatics are discussed in Chapter 3.

Timber Harvest Opposing View "For much of the past century the Forest Service, entrusted as the institutional steward of our National Forests, focused its management on an industrial-scale logging program. The result of the massive logging and road construction program was to damage watersheds, destroy wildlife habitat and imperiled plant and animal species."

Ehrlich, Anne Ph.D., David Foster Ph.D. and Peter Raven Ph.D. 2002 "Scientists Seek Logging Ban on U.S.-Owned Land"

New York Times, April 16, 2002

http://www.nytimes.com/2002/04/16/us/scientists-seek-logging-ban-on-us-owned-land.html

FS Response: Opinion, letter written to President.

Timber Harvest Opposing View "The proposition that forest values are protected with more, rather than less logging, and that forest reserves are not only unnecessary, but undesirable, has great appeal to many with a vested interest in maximizing timber harvest. These ideas are particularly attractive to institutions and individuals whose incomes depend upon a forest land base." (page 2)

"On the other hand, approaches that involve reserving of a portion of the land base, or harvest practices that leave commercially valuable trees uncut to achieve ecological goals, are often considered much less desirable as they reduce traditional sources of timber income." (page 2)

Franklin, Jerry Ph.D., David Perry Ph.D., Reed Noss Ph.D., David Montgomery Ph.D. and Christopher Frissell Ph.D. 2000. "Simplified Forest Management to Achieve Watershed and Forest Health: A Critique." http://www.coastrange.org/documents/forestreport.pdf

FS Response: Agreed, only approximately 2 percent of the fire perimeter in the fire scar would be harvested. Qualified Scientific Panel, not published document.

Timber Harvest Opposing View "We do not believe, however, that scientific literature or forestry experience supports the notions that intensively managed forests can duplicate the role of natural forests, or that sufficient knowledge and ability exist to create even an approximation of a natural old-growth forest stand." (page 3)

Franklin, Jerry F. Ph.D. and James K. Agee Ph.D.

"Forging a Science-Based National Forest Fire Policy."

Issues in Science and Technology. Fall 2003

A National Wildlife Federation publication sponsored by the Bullitt Foundation http://issues.org/20-1/franklin/

FS Response: Relevant, we are using science outlined in paper.

Timber Harvest Opposing View "Managers on the Wolverine fire still opted to cut one of the largest firelines ever in Washington, logging 114 acres of critical spotted owl habitat and felling big trees — including a giant that had stood for centuries, so large, it was a one-log load on a semi truck. Steel-tracked heavy equipment tore up fragile ground along streams. Erosive soils unique to the area were bulldozed.

Cut by the U.S. Forest Service with none of the usual environmental review, the firebreak was up to 300 feet wide and stretched more than 50 miles, from the Entiat drainage on the east, to Twin Lakes to the west. Loggers cut enough trees to fill more than 930 logging trucks.

Yet the fire never came anywhere near."

Rushing to stop a fire that never came, Forest Service logged miles of big trees, critical habitat

Seattle Times, August 9, 2016

http://projects.seattletimes.com/2016/collateral-damage/

FS Response: Article outlining circumstances that happened during active fire suppression efforts in Washington. Not relevant to this project or the proposed action.

Timber Harvest Opposing View "This is a lesson for USFS employees (with many pictures) who still think its important to sell dead and dying trees in a post-fire landscape before the trees rot and loose value. Of course logging this rare and important habitat to provide corporate profit opportunities is something an intelligent, professional, caring USFS employee would never consider."

Published by the John Muir project, 2014 http://johnmuirproject.org/forest-watch/post-fire-habitat/

FS Response: This project has an extensive list (Appendix A) of project design criteria that would reduce or eliminate those effects outlined in the article. Additionally, the proposed action focuses on areas in matrix land allocations (suitable for timber harvest) (approximately 25,386 matrix acres within the project area) and further refined to only those acres which endured approximately 50-100 percent basal area loss. Further analysis refined the proposed action acres to 4,090 by "removing units lacking economically viable products, logging systems operability and accessibility, locating and avoiding unmapped riparian reserves, and considerations for post-fire wildlife habitat and other resources." (EA at 1-1) The proposed action could potentially affect about 16% of the matrix lands within the project boundary, and could affect 30% of the matrix lands that fell into the 50-100 percent basal area loss. On a larger scale, the proposed action would affect only 2% within the fire perimeter that overlaps with Forest Service land.

Timber Harvest Opposing View "One trust fund often cited by critics is the Knutson-Vandenberg (K-V) Fund. This account receives an unlimited portion of timber sale

receipts, to be used for reforestation, timber stand improvements, and other resource mitigation and enhancement activities in timber sale areas. Forest Service managers can, therefore, fund their programs from timber sales; in the words of one critic, wildlife managers have an incentive to support timber sales that damage wildlife habitat, because they can use the revenues to mitigate that damage and to keep themselves and their staffs employed. (10)"

Gorte, Ross W. Ph.D. "Forest Service Timber Sale Practices and Procedures: Analysis of Alternative Systems." A Congressional Research Service (CRS) report, October 30, 1995. https://digital.library.unt.edu/ark:/67531/metacrs233/

FS Response: Not peer reviewed, letter to Congress. Quotes are not relevant to current Forest management policies.

Timber Harvest Opposing View "The fact is, commercial logging doesn't prevent catastrophic fires; it causes them. In the latter part of the 19th century, this was common knowledge. Relentless clearing of forests in the Great Lakes region left huge areas largely devoid of the cooling shade of trees, replacing moist natural forest microclimates with the hotter, drier conditions characterized by stump fields. Flammable logging "slash debris" covered the landscape.

It was in this setting that a massive, cataclysmic fire started near Peshtigo, Wisconsin in 1871. More than 1,200 people were killed. Similar blazes erupted in subsequent years."

Hanson, Chad Ph.D., "**The Big Lie: Logging and Forest Fires**." Published in the *Earth Island Journal*, spring 2000 issue http://yeoldeconsciousnessshoppe.com/art6.html

FS Response: Opinion, detailed response not warranted.

Timber Harvest Opposing View "Logging reduces the organic parent material (duff and woody residues) available for soil-formation processes."

Harvey, A. E., M. J. Larsen, and M. F. Jurgensen "Distribution of Ectomycorrhizae in a Mature Douglas-fir/larch Forest Soil in Western Montana"

Forest Science, Volume 22, Number 4, 1 December 1976, pp. 393-398(6)

http://www.ingentaconnect.com/content/saf/fs/1976/000000022/00000004/art00007;jsessionid=12
sdf2hphia2.alexandra

FS Response: Scientific article, not relevant due to date published (1976) and study location.

Timber Harvest Opposing View "Shifting value orientations and priorities have resulted in two conflicting management paradigms concerning natural resources. These paradigms and the societal shifts associated with them have been well articulated by Brown and Harris (1992) and Bengston (1994), as well as others. The two competing natural resource paradigms—derived from the ideas of Gifford Pinchot and Aldo Leopold, respectively— have been labeled the "Dominant Resource Management Paradigm" and the postmodern, "New Resource Manage-ment Paradigm" (Table 1). The former view advocates the utilitarian belief that natural resource management ought to be directed toward the production of goods and services beneficial to humans, whereas the latter takes a relatively biocentric view that reflects a more environmentally holistic way of thinking about resources. In terms of implementation, the postmodern paradigm questions the wisdom of top-down decision making (Shindler et al. 1996). More directly, many who identify with this paradigm simply do not trust forest managementor research experts—especially those who work for the government (Steel et al. 1992)." (page 29)

"Shifting Public Values for Forest Management: Making Sense of Wicked Problems" By Bruce Shindler, Department of Forest Resources, and Lori A. Cramer, Department of Sociology, Oregon State University
Reprinted from the Western Journal of Applied Forestry, Vol. 14, No. 1, January 1999.
https://andrewsforest.oregonstate.edu/sites/default/files/lter/pubs/pdf/pub2465.pdf

FS Response: Article that discusses the shifting of public opinion on forest management practices. Not relevant to the proposed action for this project.

Timber Harvest Opposing View "SEC. 3. FINDINGS.

Congress finds the following:

Commercial logging has many indirect costs which are very significant, but not easily measured, such as flooding damage and relief of flooding damage through Federal funds, damage to the salmon fishing industry; and harm to the recreation and tourism industries."

House Bill H. R. 1494 text. April 4, 2001 http://www.ontheissues.org/House/Bill Luther Environment.htm

FS Response: Not relevant. Discussion on a bill that never came to a vote prohibiting commercial logging on Federal public lands.

Timber Harvest Opposing View "Human tampering with nature has not been without costs. Human manipulation of existing ecosystems has also sometimes had unfortunate consequences."

Hudak, Mike Ph.D. "From Prairie Dogs to Oysters: How Biodiversity Sustains Us" from his book review of The Work of Nature: How the Diversity of Life Sustains Us by Yvonne Baskin, 1997 Newsletter of Earth Day Southern Tier, February/March 1999, p. 2 http://www.mikehudak.com/Articles/FromPrairieDogs9902.html

FS Response: Opinion, published in newsletter.

Timber Harvest Opposing View "The Quincy Library Group's (QLG's) fuelbreak strategy represents a giant step backwards from the progressive development of rational fire policies established by the 1995 Federal Wildland Fire Management Policy and Program Review."

"The fact that the QLG admits that its Plan is inconsistent with these new policies (indeed, is almost gleefully defiant of them) says a lot about the credibility of the QLG's self-purported fire management expertise."

"In spite of (or more likely because of) the intensive 'fuels reduction' activities associated with commercial logging, the Fountain Fire was truly catastrophic in its effects."

"Even 'kinder, gentler' commercial logging still inflicts environmental impacts such as eroded topsoil, degraded water quality, destroyed wildlife habitat, and extirpated species that are every bit as much symptoms of forest health problems as large-scale, severe wildfires."

"And after spending millions of dollars creating the SNEP Report, it seems wise to use its information, not ignore it or opportunistically select out statements clearly worded as assumptions, values, or goals which run contrary to factual research findings. The QLG Plan has much more to do with timber extraction than with genuine fire protection, and in that respect, it constitutes more of a forest health threat than a real solution."

"The QLG Bill resembles similar 'panic legislation' that was passed during the early 1970s in which, following some large-scale wildfires in California, Congress allowed the Forest Service to access emergency firefighting funds to conduct 'presuppression' timber sales. Many fuelbreaks were cut in the Sierras during this period, and while costs rapidly rose into tens of millions of dollars, most of these fuelbreaks failed to perform adequately during wildfire suppression incidents. Congress quickly had to take away this funding source from the Forest Service. What has become of these old fuelbreaks? Almost without exception, the agency failed to monitor or maintain them, and in a modern-day version of 'cut and run' logging, many of these old fuelbreaks have converted to chaparral brush and 'dog-hair' thickets ... a much more flammable vegetation type than the original forest cover. The QLG Bill appears to be 'deja vu' without evidence of Congress or the QLG being aware of this history of previous fuelbreak programs."

Ingalsbee, Timothy Ph.D. "Logging for Firefighting: A Critical Analysis

of the Quincy Library Group Fire Protection Plan." Unpublished research paper. 1997.

FS Response: Not published research. Content outdated and not relevant to the project as it discusses fire breaks, not part of the proposed activities for this project.

Timber Harvest Opposing View "An unprecedented rape of Mother Nature from the 1880s to the 1940s completely changed the wooded landscape in the northern Great Lakes region of America as well as the society and ecology forevermore."

Monte, Mike, **Cut and Run: Loggin' Off the Big Woods** Paperback – June 1, 2002 https://www.amazon.com/Cut-Run-Loggin-Off-Woods/dp/0764315293/ref=cm_cr_arp_d_product_top?ie=UTF8

FS Response: Link to purchase book on amazon.

Timber Harvest Opposing View "Since the 'New Perspectives' program of the early 1990s, the agency has tried to dodge public opposition to commercial logging by using various euphemisms, such as this gem from the Siskiyou National Forest: Clearcuts are called 'minimum green tree retention units.' Accordingly, Forest Service managers have believed that if they simply refer to logging as 'thinning,' or add the phrases 'fuels reduction' or 'forest restoration' to the title of their timber sale plans, then the public will accept these projects at face value, and business-as-usual commercial logging can proceed. In the face of multiple scandals and widespread public skepticism of the Forest Service's credibility, it seems that only Congress is buying the agency's labeling scheme."

Ingalsbee, Timothy Ph.D. "Logging without Limits isn't a Solution to Wildfires" published in the *Portland Oregonian*, August 6, 2002 http://www.klamathforestalliance.org/Documents/loggingwithoutlimits.html

FS Response: Opinion, newspaper article. Not a fire scientist.

Timber Harvest Opposing View "Otherwise, reporters play into the hands of powerful interests who seek to profit from public perceptions of wildland fires as "catastrophes" and "crises." For example: Government agencies who gain enormous powers to fight fires without any fiscal constraint or public accountability, and private logging companies who gain windfall profits from "salvage" logging burned trees with little or no regulatory restraint, both under self-proclaimed "states of emergency." (pg 6)

Ingalsbee, Timothy Ph.D. September 2007, "A Reporter's Guide to Wildland Fire." http://www.fusee.org/Resources/Documents/-Reporters%20Guide%202007.pdf

FS Response: Opinion, newspaper article.

Timber Harvest Opposing View "Logging-truck traffic in the Kimsquit Valley in British Columbia resulted in a 78% reduction in use of the "Zone of Hauling Activity" by radio collared bears compared to non-hauling periods (16). For 14 hours/day, 3%-23% of each bear's home range was unavailable to them because of disturbance."

"Wolverines seem to have been most affected by activities that fragment and supplant habitat, such as human settlement, extensive logging, oil and gas development, mining, recreational developments, and the accompanying access.

Jalkotzy, M.G., P.I. Ross, and M.D. Nasserden. 1997. "The Effects of Linear Developments on Wildlife: A Review of Selected Scientific Literature." Prepared for Canadian Association of Petroleum Producers. Arc Wildlife Services Ltd., Calgary. 115pp. http://www.arlis.org/docs/vol1/A/65937142.pdf

FS Response: Relevant. Effects to wildlife are outlined in the EA in chapter 3, wildlife section.

Timber Harvest Opposing View "Fear of wildfire is heavily used to sell these forest "restoration" schemes. Logging has not been proven, in practice, to reduce fire frequency or intensity. Historically, the largest, most destructive blazes, like the Tillamook conflagration, were caused from logging or fueled by slash. Unlogged forests, cool and shaded, are typically more fire resistant than cut over, dried-up stands choked with slash and weeds.

Large-scale logging (by any name) has devalued our forests, degraded our waters, damaged soils, and endangered a wide variety of plants and animals. How will the current round of politically and environmentally propelled 'restorative' logging proposals differ, in practice, from past logging regimes?"

Keene, Roy Restorative Logging? "More rarity than reality" Guest Viewpoint, the Eugene *Register Guard,* February 23, 2012 http://eugeneweekly.com/2011/03/03/views3.html

FS Response: Opinion. Detailed response not required.

Timber Harvest Opposing View "Timber harvesting operations affect hydrologic processes by reducing canopy interception and evapotranspiration. Many studies have documented changes in soil properties following tractor yarding (Stone, 1977; Cafferata, 1983), and low-ground-pressure skidding (Sidle and Drlica, 1981). More recently, researchers have evaluated cable yarding (Miller and Sirois, 1986; Purser and Cundy, 1992). In general, these studies report decreased hydraulic conductivity and increased bulk density in forest soils after harvest."

Keppeler, Elizabeth T. Robert R. Ziemer Ph.D., and Peter H. Cafferata "Effects of Human-Induced Changes on Hydrologic Systems."
An American Water Resources Association publication, June 1994 http://www.fs.fed.us/psw/publications/ziemer/Ziemer94a.PDF

FS Response: Relevant article. The project recognizes potential effects on soil and manages for them. Most soil damaging operations are minimized. See the Design Criteria in the EA, appendix A.

Timber Harvest Opposing View "Looking at the study on a larger scale, the potential for changes caused by logging is great. Absence of trees could influence water temperature by altering available sunlight, conductivity by changing the amount of organic matter that collects in the vernal ponds, or pH if the logging process deposits foreign residues to the area. Also heavy equipment used to harvest the timber has the potential to alter the terrain."

Klein, Al 2004. Logging Effects on Amphibian Larvae Populations in Ottawa National Forest. http://underc.nd.edu/assets/216499/fullsize/klein2004.pdf

FS Response: All effects to aquatic species are disclosed in Chapter 3 of the EA. See also the Design Criteria in Appendix A.

Timber Harvest Opposing View "In hopes of ending conflicts over "multiple use," an independent scientific committee has proposed that "ecological sustainability" should become the principal goal in managing the U.S. national forests and grasslands, which since 1960 have been under a congressional mandate to serve industry, recreation, and conservation all at once."

Mann, Charles C. Ph.D. and Mark L. Plummer Ph.D. "Call for 'Sustainability' in Forests Sparks a Fire"

Science 26 March 1999: Vol. 283. no. 5410, pp. 1996 – 1998 http://www.sciencemag.org/content/283/5410/1996.summary

FS Response: News focus piece, not peer reviewed. Forest manages for ecological sustainability.

Timber Harvest Opposing View "Logging removes a mass that harbor a myriad of organisms, from bacteria and actinomycetes to higher fungi. The smaller organisms, not visible to the unaided eye, are still important components of the system."

Maser, C. Ph.D., and J. M. Trappe Ph.D. "The Seen and Unseen World of the Fallen Tree", 1984 USDA Forest Service, *GTR-PNW-164* http://www.fs.fed.us/pnw/publications/pnw_gtr164/

FS Response: USDA publication. Agree with quote. This project manages for sensitive species, recognizing all components of the ecological system are important.

Timber Harvest Opposing View "Logging removes mature and maturing trees which conserve essential elements, whereas the area containing new very young planted trees following logging are susceptible to erosion and essential element loss." (pg.5)

"Logging removes tree parts that would have created and maintained diversity in forest communities." (pg. 44)

Maser, C. Ph.D., R. F. Tarrant, J. M. Trappe Ph.D., and J. F. Franklin Ph.D. 1988 "*The Forest to the Sea: A Story of Fallen Trees*" USDA Forest Service, *GTR-PNW-GTR-229* http://www.fs.fed.us/pnw/publications/pnw_gtr229/

FS Response: Outdated publication. Forest no longer uses described logging practices.

Timber Harvest Opposing View "In addition to the direct effects of habitat loss and fragmentation, logging typically reduces ecosystem health by:

a) damaging aquatic habitats through siltation, reduction in stream complexity and increased water temperatures."

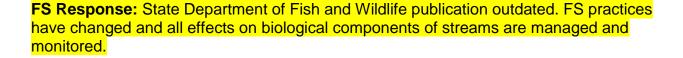
McIntosh, B.A., J.R. Sedell, J.E. Smith, R.C. Wissmar S.E. Clarke, G.H. Reeves, and L.A. Brown "Management history of eastside ecosystems: changes in fish habitat over 50 years, 1935-1992." 1994 USFS Pacific Northwest Research Station, *GTR-321 93-181* http://www.fs.fed.us/pnw/publications/pnw_gtr321/

FS Response: USDA publication. No longer relevant to current FS practices. This project minimizes habitat loss and damages to the ecosystem by using design criteria, located in Appendix A of the EA.

Timber Harvest Opposing View "Logging practices can indirectly result in changes in the biological components of a stream, and can have direct and indirect on the physical environment in streams.

The primary environmental changes of concern are the effects of siltation, logging debris, gravel scouring, destruction of developing embryos and alevins, blockage of streamflow, decrease in surface and intragravel dissolved oxygen, increase in maximum and diel water temperatures, changes in pool/riffle ratios and cover, redistribution of fishes, reduction in fish numbers, and reduction in total biomass."

Moring, John R. Ph.D. 1975. "The Alsea Watershed Study: Effects of Logging on the Aquatic Resources of Three Headwater Streams of the Alsea River, Oregon – Part III." Fishery Report Number 9 Oregon Department of Fish and Wildlife. http://www.for.gov.bc.ca/hfd/library/ffip/Moring JR1975b.pdf



Timber Harvest Opposing View "As a result of the Forest Service's well-documented mismanagement over many years of the timber sale program, taxpayers also have been stuck with the tab for hundreds of millions of dollars worth of subsidies to a profitable timber industry."

Report accuses Forest Service of mismanagement
Associated Press, *Bellongham Herald*, July 11, 2002.
http://www.citizenreviewonline.org/july 2002/report accuses.htm

FS Response: Article discussing the Roadless Rule. No detailed response required.

Timber Harvest Opposing View "Agroforestry does reduce biodiversity. In forests used for logging, whole-landscape management is crucial.

Noble, Ian R. and Rodolfo Dirzo Ph.D. **Forests as Human-Dominated Ecosystems.** *Science* Vol. 277. No. 5325, pp. 522 - 525. 25 July 1997. http://www.sciencemag.org/content/277/5325/522.abstract?maxtoshow=&HITS=10&hits=10&R ESULTFORMAT=&fulltext=logging&searchid=1136659907310_5043&FIRSTINDEX=0&journalc ode=sci

FS Response: Agreed. Accurate article but current management practices on the Forests use an interactive approach for ecologically sustainable forestry. This particular project would only manage a small percent of entire fire perimeter, in essence managing the whole landscape.

Timber Harvest Opposing View "A federal judge has blocked logging proposed for the Klamath National Forest in Siskiyou County, chiding the U.S. Forest Service for its review of the environmental damage that would result."

"The service should have done a full environmental review and done a better job projecting the impact on wildlife and forest conditions, ruled U.S. District Judge Frank C. Damrell Jr."

Judge blocks Klamath logging plan

By Don Thompson, *Associated Press* October 16, 2004

http://www.wildcalifornia.org/media/epic-in-the-news/judge-blocks-klamath-logging-plan/

FS Response: Outlines a law suit in Northern California. Effects to all resources are disclosed in Chapter 3 of the EA.

Timber Harvest Opposing View "Still, forestry experts warned in the 2000 plan that logging should be used carefully and rarely; in fact, the original draft states plainly that the "removal of large merchantable trees from forests does not reduce fire risk and may, in fact, increase such risk."

Okoand Ilan Kayatsky, Dan. "Fight Fire with Logging?" *Mother Jones*, August 1, 2002 http://motherjones.com/politics/2002/08/fight-fire-logging

FS Response: Opinion piece. Not written by fire scientists.

Timber Harvest Opposing View "That makes four timber projects since May in which U.S. District Judge Dana Christensen found fault with the U.S. Forest Service and the U.S. Fish and Wildlife Services' conclusion that cutting and burning in those areas would not significantly harm the big cats' territory."

"Christensen ruled the Endangered Species Act requires the agencies to determine whether lynx "may be present" there, which is a lesser standard than what the agencies used in concluding lynx don't "occupy" the area."

"The judge said the government approved those projects based on an unreliable conclusion they would not harm the lynx's critical habitat."

Judge stops 3 Montana logging projects over lynx

By Matt Volz, Associated Press June 26, 2013

http://news.vahoo.com/judge-stops-3-montana-logging-141919567.html

FS Response: Outlines a law suit in Montana. Not relevant to this project area. Consultation on species required by the ESA is in progress and will be complete before the decision is signed.

Timber Harvest Opposing View "Less than 5% of America's original forests remain, and these forests are found primarily on federal lands. Logging in the last core areas of biodiversity is destroying the remaining intact forest ecosystems in the United States. At the current rate of logging, these forests and their priceless biological assets will be destroyed within a few decades."

"We believe it is our professional responsibility to ask Congress to align Federal forest management with modern scientific understandings of forest ecosystems. Passage of the Act to Save America's Forests will give our nation's precious forest ecosystems the best chance or survival and recovery into the 21st century and beyond."

Raven, Peter, Ph.D., Jane Goodall, C.B.E., Ph.D., Edward O. Wilson, Ph. D. and over 600 other leading biologists, ecologists, foresters, and scientists from other forest specialties. **From a 1998 letter to congress**. http://www.saveamericasforests.org/resources/Scientists.htm

FS Response: Opinion letter addressing outdated practices.

Timber Harvest Opposing View "If the current pace of logging planned by the Forest Service continues, nearly all of America's ancient and roadless wild forests will soon be lost forever. According to a recent report by the World Resources Institute, only one percent of the original forest cover remains in large blocks within the lower 48 states."

Raven, Peter, Ph.D., from his February 9, 2001 letter to Senator Jean Carnahan http://www.saveamericasforests.org/Raven.htm

FS Response: Opinion, letter written to President.

Timber Harvest Opposing View "The Water Board has identified wastes associated with timber harvest and vegetation management activities (as defined in Attachment A) as having a potential effect on water quality. These vegetation management activities have the potential to effect water quality by causing soil to discharge to a waterbody, slump or erode by wind, or be compacted or deformed which limits the soil's ability to infiltrate or filter runoff." (pg 2)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD TIMBER HARVEST AND VEGETATION MANAGEMENT ACTIVITIES LAHONTAN REGION, "2014 TIMBER WAIVER", April 10, 2014

http://www.swrcb.ca.gov/lahontan/water_issues/programs/waste_discharge_requirements/timber_harvest/docs/timber_waiver/2014tw.pdf

FS Response: California regional water board proceeding discussing water quality in the Lahontan region. Not relevant to the project area.

Timber Harvest Opposing View "These findings also contradict the longstanding view of the Federal lands as a public warehouse of commodities to be harvested and jobs to be filled. For newcomers in the rural West, the value of these public lands is related to protecting and preserving them."

Rudzitis, Gundars. 1999 "Amenities Increasingly Draw People to the Rural West" Rural Development Perspectives, vol. 14, no. 2 http://www.colorado.edu/AmStudies/lewis/west/amenities.pdf

FS Response: Non-technical article. No detailed response warranted.

Timber Harvest Opposing View "Within this volatile atmosphere the Bush Administration presented a new proposal for fire prevention called the "Healthy Forest Initiative." The plan received wide coverage in the national media in August and September 2002 and continues to be at the center of an attempt to significantly shift public land management in the United States. At the core of the plan is an effort to create private sector incentives to promote logging/thinning projects in the national forests."

Short, Brant, Ph.D. and Dayle C. Hardy-Short Ph.D. "Physicians of the Forest": A Rhetorical Critique of the Bush Healthy Forest Initiative"

Electronic Green Journal, Issue #19, December 2003

http://escholarship.org/uc/item/4288f8j5

FS Response: Opinion.

Timber Harvest Opposing View "Four conservation groups — Alliance for the Wild Rockies, Swan View Coalition, Friends of the Wild Swan and Native Ecosystems Council — sued to halt the sale in June 2013. The groups claimed the project would harm grizzly bear, lynx, wolverine and other species and plants while damaging the forest's remaining old growth."

"The judge ordered the project be stopped and said these Forest Service lands have to be managed under federal environmental laws to protect native species just like all other national forests, Garrity said.

Judge Halts Glacier Loon Timber Sale in Swan Valley
Published in the *Flathead Beacon*, Sep 26, 2014
http://flatheadbeacon.com/2014/09/26/judge-halts-glacier-loon-timber-sale-swan-valley/

FS Response: Article talking about lawsuit in Montana. No detailed response warranted.

Timber Harvest Opposing View "Timber harvesting in British Columbia influences (a) forest hydrology; (b) fluvial geomorphology; (c) terrain stability; and (d) integrated watershed behavior. Impacts on forest hydrology are well understood and include increased average runoff, total water yield, increased storm runoff and advances in timing of floods. Stream channels and valley floors are impacted differently by fine sediment, coarse sediment and large woody debris transport. Terrain stability is influenced through gully and mass movement processes that are accelerated by timber harvesting. Impacts on integrated watershed behavior are assessed through disturbed sediment budgets and lake sediments."

Slaymaker, Olav Ph.D. "Assessment of the Geomorphic Impacts of Forestry in British Columbia" *AMBIO*: A Journal of the Human Environment 29(7):381-387. 2000 http://www.bioone.org/doi/abs/10.1579/0044-7447-29.7.381

FS Response: Research article. NOT relevant to this project. Research references B.C.

Timber Harvest Opposing View This link contains photos of logging around the word. Can you guess which 7 were taken of the after-effects of a timber sale in national forest land?

http://www.bing.com/images/search?q=logging+impact+on+environment&qpvt=logging+impact+on+environment

FS Response: No substantive comment, image search result.

Timber Harvest Opposing View "After logging, peak pipeflow was about 3.7 times greater than before logging."

"The use of heavy logging equipment was expected to compact the soil, reduce infiltration rates, and increase surface runoff. In addition, heavy equipment might collapse some of the subsurface pipes, increasing local pore water pressure and the chance of landslides (Sidle, 1986)."

Ziemer, Robert R. Ph.D., "Effect of logging on subsurface pipeflow and erosion: coastal northern California, USA." Proceedings of the Chengdu Symposium, July 1992. *IAHS Publication. No. 209*, 1992 http://www.fs.fed.us/psw/publications/ziemer/Ziemer92.PDF

FS Response: Document not relevant to this project or current Forest management policies. Extensive design criteria in Appendix A and best management practices were developed to mitigate the effects of equipment use.

Timber Harvest Opposing View "This post-fire renewal, known as "complex early seral forest," or "snag forest," is quite simply some of the best wildlife habitat in forests, and is an essential stage of natural processes that eventually become old-growth forests over time. This unique habitat is not mimicked by clearcutting, as the legislation incorrectly suggests. Moreover, it is the least protected of all forest habitat types, and is often as rare, or rarer, than old-growth forest, due to extensive fire suppression and damaging forest management practices such as those encouraged by this legislation."

Open Letter to U.S. Senators and President Obama from Scientists
Concerned about Post-fire Logging and Clearcutting on National Forests. September 2015
http://johnmuirproject.org/wp-content/uploads/2015/09/Final2015ScientistLetterOpposingLoggingBills.pdf

FS Response: This project has an extensive list (Appendix A) of project design criteria that would reduce or eliminate those effects outlined in the article. Additionally, the proposed action focuses on areas in matrix land allocations (suitable for timber harvest) (approximately 25,386 matrix acres within the project area) and further refined to only those acres which endured approximately 50-100 percent basal area loss. Further analysis refined the proposed action acres to 4,090 by "removing units lacking economically viable products, logging systems operability and accessibility, locating and avoiding unmapped riparian reserves, and considerations for post-fire wildlife habitat and other resources." (EA at 1-1) The proposed action could potentially affect about 16% of the matrix lands within the project boundary, and could affect 30% of the matrix lands that fell into the 50-100 percent basal area loss. On a larger scale, the proposed action would affect only 2% within the fire perimeter that overlaps with Forest Service land.

Timber Harvest Opposing View "Recently, so called "salvage" logging has increased on national forests in response to a timber industry invented "forest health crisis" which points the finger at normal forest processes of fire, fungi, bacteria, insects and other diseases. In fact the crisis in the national forests is habitat destruction caused by too much clearcutting.

The real threat facing forests are excessive logging, clearcutting and roadbuilding that homogenize and destroy soil, watersheds and biodiversity of native forests."

Partridge, Arthur Ph.D., professor emeritus, University of Idaho Statement at a Press Conference with Senator Robert Torricelli about S. 977 and HR 1376), the Act to Save America's Forests April 28, 1998, U.S. Capitol http://www.saveamericasforests.org/news/ScientistsStatement.htm

FS Response: Opinion and testimony. Excerpts not relevant to this project.

Timber Harvest Opposing View "Extreme disturbances, such as wildfire or tractor logging, cause the loss of nutrients, mycorrhizae, and organic matter. These combined losses reduce long-term site productivity and may lead to sustained periods of extended erosion that could exacerbate degradation.

Elliot, W.J.; Page-Dumroese, D.; Robichaud, P.R. 1999. The effects of forest management on erosion and soil productivity.

From the proceedings of the Symposium on Soil Quality and Erosion Interaction, Keystone, CO, July 7, 1996. Ankeney, IA: Soil and

Water Conservation Society. 16 p.

http://forest.moscowfsl.wsu.edu/cgi-bin/engr/library/searchpub.pl?pub=1999c

FS Response: Agree. This project analyzes the impact to soils from project activities in the EA on page 3-72.

Timber Harvest Opposing View "The lawsuit raises concerns that land managers erred in their finding that the project will not hurt wildlife habitat – particularly that of lynx, bull trout and grizzly bears – and violated the National Environmental Policy Act by never completing an environmental impact statement. The groups have also filed separate legal notices of intent to challenge two similar thinning projects in the Flathead National Forest."

"The South Fork of the Flathead River is a protected wild and scenic river that is home to lynx, wolverine, grizzly bear, gray wolves, fisher and bull trout. The area was designated as critical habitat for lynx and bull trout and deemed essential the survival and recovery of grizzly bears in the Northern Rockies"

Conservationists sue over timber sale on Flathead's South Fork
By TRISTAN SCOTT of the *Missoulian*, Feb 29, 2012
http://missoulian.com/news/local/conservationists-sue-over-timber-sale-on-flathead-s-south-fork/article-c7b0e12e-6287-11e1-b6db-001871e3ce6c.html

FS Response: Unable to locate article. From the summary provided, this is an article about a law suit over a timber sale in Montana. For effects of this project, see the Chetco Bar Fire Salvage EA.

Timber Harvest Opposing View "Major report findings:

- 1) If we ended the timber sales program on national forests and redirected the logging subsidies we could provide over \$30,000 for each public lands timber worker for retraining or ecological restoration work - and still have over \$800 million left over for taxpayer savings in the first year alone.
- 2) We don't need to log national forests for our timber supply, given the fact that the timber cut annually from national forests nationwide now comprises only 3.3% of this nation's total annual wood consumption, and less than 4% of the sawtimber used for construction.
- 3) Logging on national forests INCREASES the risk of forest fires more than any other human activity.
- 4) A bipartisan nationwide poll conducted in 1998 found that 69% of Americans now oppose allowing timber companies to log our national forests.

Hansen, Chad, Ph.D., **THE FACTS: Ending Timber Sales on National Forests** Published in the *Earth Island Journal*, June 22, 1999 http://www.colorado.edu/AmStudies/lewis/west/fedsales.pdf

FS Response: Link is not functional. Opinion and testimony. Excerpts not relevant to this project.

Timber Harvest Opposing View "Indeed, the major justifications given for logging public lands is typically some social or ecological benefit—to reduce fires, clean up bug killed trees, fix watersheds, restore forest health or provide for "economic stability" to rural communities. In far too many cases, all of these are just cover to hide the main reason for logging—to maintain the local timber industry at the expense of our forest's ecological integrity and taxpayer dollars."

WUERTHNER, GEORGE, Why are Conservation Groups Advocating Logging Public Forests?

Published by *Counterpunch*, September 27, 2012 http://www.counterpunch.org/2012/09/27/why-are-conservation-groups-advocating-logging-public-forests/

FS Response: Opinion.

Timber Harvest Opposing View "Deforestation is clearing Earth's forests on a massive scale, often resulting in damage to the quality of the land. Forests still cover about 30 percent of the world's land area, but swaths half the size of England are lost each year."

"Deforestation can have a negative impact on the environment. The most dramatic impact is a loss of habitat for millions of species. Eighty percent of Earth's land animals and plants <u>live in forests</u>, and many cannot survive the deforestation that destroys their homes."

Deforestation

Published by *National Geographic*, 2017 http://www.nationalgeographic.com/environment/global-warming/deforestation/

FS Response: FS Policy does not allow for converting forest into non-forest. Not relevant.

Timber Harvest Opposing View "It is impossible to overstate the importance of humankind's clearing of the forests. The transformation of forested lands by human actions represents one of the great forces in global environmental change and one of the great drivers of biodiversity loss. The impact of people has been and continues to be profound. Forests are cleared, degraded and fragmented by timber harvest, conversion to agriculture, road-building, human-caused fire, and in myriad other ways. The effort to use and subdue the forest has been a constant theme in the transformation of the earth, in many societies, in many lands, and at most times. Deforestation has important implications for life on this planet."

Global Deforestation

Published by the University of Michigan http://resilience.earth.lsa.umich.edu/units/deforestation/index.html

FS Response: FS Policy does not allow for converting forest into non-forest. Not relevant.

Timber Harvest Opposing View "Photosynthesis is one of only two significant mechanisms for removing carbon dioxide from the atmosphere (the other being dissolution into water, leading to destructive ocean acidification). Carbon dioxide is released when trees are cut down, and deforestation accounts for <u>at least 15 percent</u> of global carbon emissions. Thus, cutting down trees is a double-whammy because we not only lose carbon capture capacity, but we release more carbon, too."

Trees Are Our Climate Saviors - So Stop Logging on Public Land
The Huffington Post, 02/12/2014
http://www.huffingtonpost.com/ellen-moyer-phd/trees-are-our-climate-logging b 4775894.html

FS Response: Opinion. Additionally climate change is addressed in chapter 3 at 3-164.

Timber Harvest Opposing View "Logging activities have numerous impacts on aquatic systems in the Sierra Nevada. The end result of logged landscapes is a highly altered forest system which creates significant problems related to erosion, sedimentation and altered stream flow patterns. Logging removes large trees that normally fall into streams and provide shelter and thermal cover, raises water temperatures and pH, and degrades the chemical and ecological conditions and food webs that fish need to survive. Logging and the roads created to facilitate logging also significantly degrade stream ecosystems by introducing high volumes of sediment into streams, changing natural streamflow patterns, and altering stream channel morphology. Areas that have been logged are far more likely to suffer from major landslides and erosion events which deposit abnormally high levels of sediment into area streams. Roads, ditches, and newly created gullies form new, large networks of flow paths across the landscape. These logged areas therefore, sustain much higher discharge volumes after a storm event than they ever did when the forest was intact."

Logging Impacts

Published by Sierra Forest Legacy, 2012 http://www.sierraforestlegacy.org/FC FireForestEcology/FFE LoggingImpacts.php

FS Response: This is a general website advertising the Sierra Forest Legacy group, whom is opposed to logging. All opinion.





Forestry Photo: NOAA

"Natural resource use and extraction leading to habitat modification can have significant direct and indirect

impacts to salmon populations. Land use activities associated with logging, road construction, urban development, mining, agriculture, and recreation have significantly altered fish habitat quantity and quality. Associated impacts of these activities include: alteration of streambanks and channel morphology; alteration of ambient stream water temperatures; degradation of water quality; reduction in available food supply; elimination of spawning and rearing habitat; fragmentation of available habitats; elimination of downstream recruitment of spawning gravels and large woody debris; removal of riparian vegetation resulting in increased stream bank erosion; and increased sedimentation input into spawning and rearing areas resulting in the loss of channel complexity, pool habitat, suitable gravel substrate, and large woody debris."

Pacific Salmonids: Major Threats and Impacts

Published by NOAA fisheries Office of Protecte Resources, May 15, 2014 http://www.nmfs.noaa.gov/pr/species/fish/salmon.html

FS Response: NOAA fisheries website. Before the decision is signed, consultation with NOAA fisheries will be completed on salmonids.

Timber Harvest Opposing View "Opponents of HR 1526, including Senate Democrats and the White House, are apprehensive about the bill's measures to decrease regulations on logging, while pointing out that the economic stimulation of logging would counteract the outdoor recreation industries that have flourished in these same regions. An integral part of the bill is a measure to decrease public input, environmental analysis, and federal regulation of timber harvesting projects, which opponents say decreases control over the timber industry and would lead to a resumption of rampant deforestation experienced in the early-to-mid twentieth century. While the logging industry could create more jobs and provide economic stimulation to rural counties, logging would damage the outdoor recreation industry that has flourished in communities adjacent to national parks and forest. Therefore, HR 1526 would essentially destroy one newly established industry in the hope of reinstating what many consider an antiquated industry."

Palmisano, Joseph, Logging in National Parks and Forests: A contentious Debate Published by Law/Street, October 3, 2014

https://lawstreetmedia.com/issues/energy-and-environment/should-logging-be-encouraged-in-national-parks-and-forests-under-hr-1526/

FS Response: Website outlining pros and cons of logging, from a legal standpoint. Not specific to this project, rather larger policy issues.

Timber Harvest Opposing View "Timber cutting damages fisheries. In the Pacific Northwest 103 salmon species are already extinct and 214 native salmon stocks at risk of extinction. Research has consistently shown that clearcuts and logging roads have catastrophic consequences for our native fish populations."

"Logging is linked to increased severity of forest fires. A scientific study of the Sierra Nevada forests, commissioned and funded by Congress, found that "more than any other human activity, logging has increased the risk and severity of fires by removing the cooling shade of trees and leaving flammable debris." These logging-caused forest fires cost lives, as well as several hundred million dollars of taxpayer money each year in forest fire-fighting expenses."

Hudak, Mike, **Legislation Would Ban Logging On Federal Lands** published in *EarthTimes*, March/April 1998, p. 2 http://www.mikehudak.com/Articles/BillWouldEndLogging9803.html

FS Response: Article talking about legislation that never passed. No response required.

Timber Harvest Opposing View "Juneau, AK — Today, the U.S. Forest Service released its long-awaited proposal for amending the Tongass Land Management Plan and the results are disappointing. We will continue to work with the Obama administration to correct the pervasive mistakes in this plan.

Instead of making the promised rapid transition out of old-growth logging, the Forest Service's proposed plan perpetuates the conflict and controversy of clear-cutting Tongass old-growth forests for at least another 15 years and possibly much longer, destroying the very same forests that support our world-class fishing, hunting, tourism and recreation industries."

Forest Service Plan Would Perpetuate Destruction of Tongass Old-Growth Published by <u>Earth Justice</u>, June 30, 2016 https://earthjustice.org/news/press/2016/forest-service-plan-would-perpetuate-destruction-of-tongass-old-growth

FS Response: Article outlining the Tongass NF forest plan, not relevant to this project.

Timber Harvest Opposing View "Unfortunately, in this particular case we were forced to go to court to stop the Colt-Summit timber sale, which authorizes 2,038 acres of logging in bull trout, lynx and grizzly bear critical habitat and opens up 17 miles of new or previously closed roads to new noxious weed infestation for the very good reasons

"If this so-called "collaborative" proposal heeded existing science and followed federal law, the Alliance for the Wild Rockies wouldn't have a problem with it. Unfortunately, that's not the case. Simply put, the agency refuses to listen to well-documented and accurate evidence. Thus, we have asked the Federal District Court to stop this timber sale for the sake of taxpayers and the myriad of old growth dependent species that rely on unlogged national forests."

'Collaborative' logging proposal destroys wildlife habitat
Published by *Helena Independent Record*, March 6, 2012
http://helenair.com/news/opinion/collaborative-logging-proposal-destroys-wildlife-habitat/article fce056bc-675b-11e1-862b-0019bb2963f4.html

listed below."

FS Response: Unable to open article. Article about law suit in Montana. Not relevant to this project.

For those who have read this far it should be evident that independent science reveals logging inflicts tragic effects to natural resources. Ask yourself why the USFS budget for fire and timber sales is larger than all other line items combined. Now ask yourselves who or what the agency serves.